WHAT IS CLAIMED IS:

1. A cold work steel article, wherein the article comprises a material having a composition, in % by weight, of:

Carbon	from more than about 0.6 to less than about 1.0
Silicon	from more than about 0.3 to less than about 0.85
Manganese	from more than about 0.2 to less than about 1.5
Phosphorus	from 0 to about 0.03
Sulfur	from 0 to less than about 0.5
Chromium	from more than about 4.0 to less than about 6.2
Molybdenum	from more than about 1.9 to less than about 3.8
Nickel	from 0 to less than about 0.9
Vanadium	from more than about 1.0 to less than about 2.9
Tungsten	from more than about 1.8 to less than about 3.4
Copper	from 0 to less than about 0.7
Cobalt	from more than about 3.8 to less than about 5.8
Aluminum	from 0 to less than about 0.065
Nitrogen	from 0 to less than about 0.2
Oxygen	from 0 to about 0.012

the balance being iron and accompanying and impurity elements due to smelting, the material produced by a powder metallurgical process.

2. The article of claim 1, wherein the article, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 40 J.

3. The article of claim 1, wherein one or more elements in the material are present in the following concentrations:

Carbon	from more than about 0.75 to less than about 0.94
Silicon	from more than about 0.35 to less than about 0.7
Manganese	from more than about 0.25 to less than about 0.9

Phosphorus	from 0 to about 0.025
Sulfur	from 0 to less than about 0.34
Chromium	from more than about 0.4 to less than about 5.9
Molybdenum	from more than about 2.2 to less than about 3.4
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.5 to less than about 2.6
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to less than about 0.45
Cobalt	from more than about 4.0 to less than about 5.0
Aluminum	from 0 to less than about 0.05
Nitrogen	from more than about 0.01 to less than about 0.1
Oxygen	from 0 to about 0.010.

4. The article of claim 1, wherein the elements in the material are present in the following concentrations:

Carbon	from more than about 0.75 to less than about 0.94
Silicon	from more than about 0.35 to less than about 0.7
Manganese	from more than about 0.25 to less than about 0.9
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to less than about 0.34
Chromium	from more than about 0.4 to less than about 5.9
Molybdenum	from more than about 2.2 to less than about 3.4
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.5 to less than about 2.6
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to less than about 0.45
Cobalt	from more than about 4.0 to less than about 5.0
Aluminum	from 0 to less than about 0.05
Nitrogen	from more than about 0.01 to less than about 0.1
Oxygen	from 0 to about 0.010.

5. The article of claim 1, wherein one or more elements in the material are present in the following concentrations:

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to about 0.025
Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.8 to less than about 2.4
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to about 0.3
Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

6. The article of claim 1, wherein the elements in the material are present in the following concentrations:

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to about 0.025
Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.8 to less than about 2.4
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to about 0.3

Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

7. The article of claim 4, wherein one or more elements in the material are present in the following concentrations:

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Sulfur	from 0 to about 0.025
Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Vanadium	from more than about 1.8 to less than about 2.4
Copper	from 0 to about 0.3
Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

8. The article of claim 1, wherein one or more impurity elements in the material are present in the following concentrations in % by weight:

Tin	0 to not more than about 0.02
Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

9. The article of claim 3, wherein one or more impurity elements in the material are present in the following concentrations in % by weight:

Tin	0 to not more than about 0.02

Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

10. The article of claim 6, wherein impurity elements in the material are present in the following concentrations in % by weight:

Tin	0 to not more than about 0.02
Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

11. The article of claim 1, wherein the article has a pressure yielding point at a hardness of about 61 HRC of higher than about 2,700 MPa.

12. The article of claim 3, wherein the article, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 80 J.

13. The article of claim 5, wherein the article, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 100 J.

14. The article of claim 9, wherein the article, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 100 J.

15. The article of claim 1, wherein the powder metallurgical process comprises atomizing the melt with nitrogen to produce a metal powder having a powder grain size of not larger than about 500 μm.

16. The article of claim 15, wherein the powder metallurgical process further comprises placing the metal powder into a vessel while avoiding oxygen admission, closing the vessel and hot isostatically pressing the metal powder in the closed vessel to produce a blank.

17. The article of claim 16, wherein the process further comprises a hot forming of the blank.

18. A process for producing a cold work steel article, which process comprises making a blank of a metal material by a powder metallurgical process and converting the blank into the article, wherein the metal material comprises, in % by weight:

Carbon	from more than about 0.6 to less than about 1.0
Silicon	from more than about 0.3 to less than about 0.85
Manganese	from more than about 0.2 to less than about 1.5
Phosphorus	from 0 to about 0.03
Sulfur	from 0 to less than about 0.5
Chromium	from more than about 4.0 to less than about 6.2
Molybdenum	from more than about 1.9 to less than about 3.8
Nickel	from 0 to less than about 0.9
Vanadium	from more than about 1.0 to less than about 2.9
Tungsten	from more than about 1.8 to less than about 3.4
Copper	from 0 to less than about 0.7
Cobalt	from more than about 3.8 to less than about 5.8
Aluminum	from 0 to less than about 0.065
Nitrogen	from 0 to less than about 0.2
Oxygen	from 0 to about 0.012

the balance being iron and accompanying and impurity elements due to smelting.

19. The process of claim 18, wherein the metal material comprises:

Carbon	from more than about 0.75 to less than about 0.94
Silicon	from more than about 0.35 to less than about 0.7

Manganese	from more than about 0.25 to less than about 0.9
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to less than about 0.34
Chromium	from more than about 0.4 to less than about 5.9
Molybdenum	from more than about 2.2 to less than about 3.4
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.5 to less than about 2.6
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to less than about 0.45
Cobalt	from more than about 4.0 to less than about 5.0
Aluminum	from 0 to less than about 0.05
Nitrogen	from more than about 0.01 to less than about 0.1
Oxygen	from 0 to about 0.010.

20. The process of claim 18, wherein the article, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 80 J.

21. The process of claim 20, wherein the article has a pressure yielding point at a hardness of about 61 HRC of higher than about 2,700 MPa.

22. The process of claim 20, wherein impurity elements in the material are present in the following concentrations, in % by weight:

Tin	0 to not more than about 0.02
Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

23. The process of claim 18, wherein the powder metallurgical process comprises atomizing the melt with nitrogen to produce a metal powder having a powder grain size of not larger than about 500 μm.

24. The process of claim 23, wherein the powder metallurgical process further comprises placing the metal powder into a vessel while avoiding oxygen admission, closing the vessel and hot isostatically pressing the metal powder in the closed vessel to produce the blank.

25. The process of claim 18, wherein the process comprises a hot forming of the blank.

26. The process of claim 23, wherein the nitrogen for atomizing the melt is of high purity.

27. The process of claim 24, wherein the material comprises

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to about 0.025
Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.8 to less than about 2.4
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to about 0.3
Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

28. A metal material for producing a cold work steel article by a powder metallurgical process, which material comprises, in % by weight:

Carbon	from more than about 0.6 to less than about 1.0
Silicon	from more than about 0.3 to less than about 0.85
Manganese	from more than about 0.2 to less than about 1.5
Phosphorus	from 0 to about 0.03
Sulfur	from 0 to less than about 0.5
Chromium	from more than about 4.0 to less than about 6.2
Molybdenum	from more than about 1.9 to less than about 3.8
Nickel	from 0 to less than about 0.9
Vanadium	from more than about 1.0 to less than about 2.9
Tungsten	from more than about 1.8 to less than about 3.4
Copper	from 0 to less than about 0.7
Cobalt	from more than about 3.8 to less than about 5.8
Aluminum	from 0 to less than about 0.065
Nitrogen	from 0 to less than about 0.2
Oxygen	from 0 to about 0.012

the balance being iron and accompanying and impurity elements due to smelting.

29. The material of claim 28, wherein one or more elements in the material are present in the following concentrations:

Carbon	from more than about 0.75 to less than about 0.94
Silicon	from more than about 0.35 to less than about 0.7
Manganese	from more than about 0.25 to less than about 0.9
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to less than about 0.34
Chromium	from more than about 0.4 to less than about 5.9
Molybdenum	from more than about 2.2 to less than about 3.4
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.5 to less than about 2.6
Tungsten	from more than about 2.0 to less than about 3.0

Copper	from 0 to less than about 0.45
Cobalt	from more than about 4.0 to less than about 5.0
Aluminum	from 0 to less than about 0.05
Nitrogen	from more than about 0.01 to less than about 0.1
Oxygen	from 0 to about 0.010.

30. The material of claim 28, wherein the elements in the material are present in the following concentrations:

Carbon	from more than about 0.75 to less than about 0.94
Silicon	from more than about 0.35 to less than about 0.7
Manganese	from more than about 0.25 to less than about 0.9
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to less than about 0.34
Chromium	from more than about 0.4 to less than about 5.9
Molybdenum	from more than about 2.2 to less than about 3.4
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.5 to less than about 2.6
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to less than about 0.45
Cobalt	from more than about 4.0 to less than about 5.0
Aluminum	from 0 to less than about 0.05
Nitrogen	from more than about 0.01 to less than about 0.1
Oxygen	from 0 to about 0.010.

31. The material of claim 30, wherein one or more elements in the material are present in the following concentrations:

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Sulfur	from 0 to about 0.025

Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Vanadium	from more than about 1.8 to less than about 2.4
Copper	from 0 to about 0.3
Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

32. The material of claim 28, wherein the elements in the material are present in the following concentrations:

Carbon	from more than about 0.8 to less than about 0.9
Silicon	from more than about 0.4 to less than about 0.65
Manganese	from more than about 0.3 to less than about 0.5
Phosphorus	from 0 to about 0.025
Sulfur	from 0 to about 0.025
Chromium	from more than about 4.1 to less than about 4.5
Molybdenum	from more than about 2.5 to less than about 3.0
Nickel	from 0 to less than about 0.5
Vanadium	from more than about 1.8 to less than about 2.4
Tungsten	from more than about 2.0 to less than about 3.0
Copper	from 0 to about 0.3
Cobalt	from more than about 4.2 to less than about 4.8
Aluminum	from more than about 0.01 to less than about 0.045
Nitrogen	from more than about 0.05 to less than about 0.08
Oxygen	from 0 to about 0.009.

33. The material of claim 28, wherein one or more impurity elements in the material are present in the following concentrations in % by weight:

Tin	0 to not more than about 0.02
Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

34. The material of claim 32, wherein impurity elements in the material are present in the following concentrations in % by weight:

Tin	0 to not more than about 0.02
Antimony	0 to not more than about 0.022
Arsenic	0 to not more than about 0.03
Selenium	0 to not more than about 0.012
Bismuth	0 to not more than about 0.01.

35. The material of claim 31, wherein the material, when subjected to a heat treatment to a hardness of about 64 HRC, has an impact strength at room temperature of higher than about 100 J.

36. A metal powder which comprises the material of claim 28.

37. The metal powder of claim 36, wherein the metal powder has a powder grain size of not larger than about 500 μm.

38. The metal powder of claim 37, wherein the metal powder has been produced by atomization of a metal melt with an inert gas.

39. The metal powder of claim 38, wherein the inert gas comprises nitrogen.